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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,859	01/24/2002	Victor F. Petrenko	388506	2937
30955	7590	01/26/2006		
LATHROP & GAGE LC 4845 PEARL EAST CIRCLE SUITE 300 BOULDER, CO 80301			EXAMINER FASTOVSKY, LEONID M	
			ART UNIT 3742	PAPER NUMBER

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/057,859

**Applicant(s)**

PETRENKO ET AL.

**Examiner**

Leonid M. Fastovsky

**Art Unit**

3742

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-39 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 24 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-7, 12-16, 19-20, 24-27 and 29-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al in view of Storey (3,610,861). Shimada teaches a method and a system for melting ice on a surface 1, the system comprising an electrical conductor 5 proximate to the surface 1, an AC power source 4 for providing a high-frequency voltage in the electrical conductor-induction coil 5 that generated a high-frequency alternating electric field at the surface 1 sufficient to melt ice at the surface, and the system component 2 functions as an electric sink. However, Shimada is silent about the coil being in contact or not with the surface 1. Storey discloses a method and means for heating comprising an induction coil 10 that is not in contact with the surface-bar 11. It would have been obvious to one having ordinary skill in the art to modify Shimada's invention to include a conductor-coil without contact with the surface as taught by Storey in order to receive and heat the surface-bar (col. 2, lines 18-25).

A recitation "a cableway" directed to the manner in which a claimed apparatus intended to be used does not distinguish the claimed apparatus from the prior art- if the prior art

has the capability to so perform. See MPEP 2114 and Ex parte Masham, 2 USPQ2d 1647 (1987).

As for claim 13, Shimada uses inherently the tower in order to connect power lines to it

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada in view of Storey and further in view of Wiseman et al.

Shimada in view of Storey discloses substantially the claimed invention, but is silent regarding 180 degree out of phase in AC system. Wiseman discloses a heating system with phase control in which Mosfet Q3 is 180 degree out of phase with respect to Mosfet Q2 (col. 6, lines 1-34). It would have been obvious to one having ordinary skill in the art to modify the invention of Shimada in view of Storey to include AC power source with 180 degree out of phase in order to get a steady state operation wherein the opposite polarity pulses will have the same width (col. 6, lines 35-43).

4. Claims 3, 9-10, 17-18, 25-26 and 28-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada in view of Storey and Casey (3,042,918).

Shimada in view of Storey discloses substantially the claimed invention including a frequency of 2350 MHz, but does not teach a voltage range and an electrical ground.

Casey discloses a system for deicing antenna 10 comprising an electrical deicing circuit with a current source 85 with a voltage to the ground of 7.3 kv (col. 3, lines 67-75, col. 4, lines 1-10).

It would have been obvious to one having ordinary skill in the art to modify the invention of Shimada in view of Storey to include a high-frequency range and a voltage range as taught by Casey because a high-frequency range and a voltage range can be

determined by the user having specific a desired result in mind, and also connect the system components to electrical ground as conventional in the art.

5. Claims 21, 27 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada in view of Storey and further in view of Casey.

Shimada in view of Storey discloses substantially the claimed invention, but is silent about a second conductor and an insulator. Casey discloses a plurality of conductors 88, 90 and insulators 82. It would have been obvious to one having ordinary skill in the art to modify the invention of Shimada in view of Storey to include an additional- second conductor for durability of the system and include an insulator in order to prevent a short circuit as taught by Casey.

### ***Response to Arguments***


6. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Further, the prior art of Casey relates to the system deicing a surface and the prior art of Storey and Wiseman are pertinent to the particular problems of a conductor-coil without a contact arrangement and 180 degree out of phase in AC system in accordance with MPEP 2141.01(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid M Fastovsky whose telephone number is 571-272-4778. The examiner can normally be reached on M-Th. 8.00 am -6.00 pm.

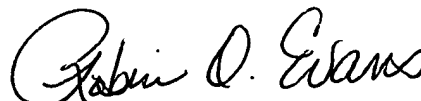
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Leonid M Fastovsky  
Examiner  
Art Unit 3742

lmf

1/11/06

  
ROBIN EVANS  
SUPERVISORY PATENT EXAMINER  
1/23/06